

## EXECUTIVE SUMMARY

# GREEN ECONOMY IN A CHANGING ARAB WORLD

2011 Report of the Arab Forum for Environment and Development (AFED)

Arab economies have underperformed over the past four decades. Arab countries have adopted aggressive economic growth models, but in doing so have gravely undermined progress on social and environmental issues. The ensuing forms of poverty, unemployment, food and water security threats, and environmental degradation continue to plague Arab economies. These shortfalls are not necessarily borne out of natural limitations. Rather, they are the outcomes of policy choices.

The shortcomings in the performance of Arab economies have also significantly contributed to deteriorating social conditions. The persistent poverty and unemployment have led to social marginalization, which is further compounded by income disparities. The aggregate impacts of these shortfalls have caused social and political instability. Demands for change across Arab countries reveal that the mounting economic, social, and environmental strains and the resultant implications on livelihood security have become unsustainable.

This report of the Arab Forum for Environment and Development (AFED) advocates a development model rooted in a green economy. A fundamental tenet of a green economy is giving equal weight to economic development, social equity, and environmental sustainability. This report argues that meeting these three goals provides a sound foundation for addressing the shortcomings of Arab economies, from curbing poverty and unemployment, to attaining food, water, and energy security, to achieving more equitable forms of income distribution. Moreover, a green economy places great emphasis on the efficient use and deployment of natural assets to diversify the economy, which in turn provides immunity against the volatilities and recessionary pressures of the global economy.

The systemic strains caused by Arab development models can be appreciated by examining indicators across a range of dimensions. Poverty continues to afflict 65 million people in Arab countries. Economic insecurity is further aggravated by disturbingly high unemployment rates of 14.8% for the general population, reaching 27.3% among the youth. Collectively, these economies have scored less than a 0.5% rise in real gross domestic product (GDP) per capita from 1980 to 2004. These figures cast doubt on the ability of Arab economies, as currently structured, to create 51 million new jobs projected to be required by 2020, just to accommodate new entrants into the work labor force, while keeping current unemployment rates the same.

Arab development strategies continue to be dominated by investments in extractive commodity products earmarked for export markets. These industries

require high initial investments but generate low levels of employment. Despite generating high GDP growth, this model leaves Arab economies more vulnerable to global market volatilities, while failing to significantly create jobs. The lack of income diversification is a primary cause of the structural weakness of Arab economies.

### **SHORTFALLS OF ARAB DEVELOPMENT MODELS**

The state of water resources is nearing a crisis in most Arab countries, driven mostly by policies that encourage over-consumption and tolerate over-exploitation of the scarce water resources available, leaving future generations to pay the price of current policies. In Arab countries today, more than 45 million people accounting for 10% of the population lack access to clean water and safe sanitation.

Food security poses another major threat to Arab countries, driven primarily by negligence and underdevelopment of the agricultural sector, resulting in poor agricultural productivity, low irrigation efficiency rates, and weak extension services to farmers. The net import bill for the main food commodities was \$30 billion in 2008, including \$18.3 billion for cereals. The escalating food import bills cause large trade deficits, strain the public budgets of Arab countries, and make them vulnerable to export bans by other countries.

Arab economies continue to unsustainably deplete renewable natural resources, motivated by short-term profits, causing environmental impoverishment of scarce land and water resources while discounting the value of these resources to future generations. The average annual cost of environmental degradation in Arab countries has been estimated to be \$95 billion, equivalent to 5% of their combined GDP in 2010.

Nearly 60 million people in Arab countries lack access to affordable energy services, limiting their opportunities for improved living standards. Energy security is becoming a serious concern for oil-importing countries because of high oil prices. A number of Arab economies are among the least energy efficient in the world, measured by their annual CO<sub>2</sub> emissions per capita and per unit of GDP. With the demand for electricity escalating in these countries, the policy of building more power plants and providing energy subsidies will no longer be economically sustainable.

Transportation policies in Arab countries have focused primarily on highway and road construction rather than on mass public transit. The lack of effective intervention policies in the transportation sector has resulted in serious traffic congestion in urban centers, poor air quality in many cities, and land degradation.

Cities in the Arab region suffer from chaotic land-use patterns and excessive urban sprawl, leaving infrastructure systems incapable of adequately supporting their populations. Rural-to-urban migration and high housing costs in many Arab cities have contributed to the spread of slum areas, characterized by inadequate - if not entirely absent - basic services.

Energy and water use in the existing building stock across the region, and in particular in commercial and public buildings, is alarmingly inefficient. The internationalized approach to architecture and construction in the region is

insufficiently attuned to the local climatic conditions, resulting in wasteful use of energy.

The waste management sector in Arab countries is characterized by underdevelopment, underinvestment, and high-risk waste dumping practices. The sector is plagued by insufficient regulations and weak waste disposal standards. In many Arab countries, over 50% of all waste generated remains uncollected. Open-air burning is often used at dumpsites, allowing decomposing waste products to pollute the air, soil, and ground and surface water.

### **CHANGING COURSE: TRANSITIONING TO A GREEN ECONOMY**

Making the transition to a green economy will require a fundamental review and redesign of public policies to stimulate shifts in production, consumption, purchasing, and investment patterns. The chapters of this report present proposed enabling policies and conditions that will be needed to transition to a green economy across eight priority sectors.

The report calls upon Arab governments to prioritize agricultural rural development as a strategic policy objective to alleviate rural poverty and reverse years of neglect. Such a policy shift would enable farmers, aided by well-designed extension services, to improve seeds, irrigation efficiency, soil conservation, agricultural yields, and sustainable practices. Revitalizing the agricultural sector will increase its share in the productive labor force, improve living standards, and limit rural to urban migration. A shift to a 40% share in the labor force by agricultural workers in the Arab region would generate more than 10 million jobs in the sector. In addition, shifting to sustainable agricultural practices is expected to result in savings to Arab countries of between 5-6% of GDP, amounting to about \$100 billion annually, as a result of increased water productivity, improved public health, and better-protected environmental resources.

Policy shifts in the water sector must begin with the introduction of institutional and legal reforms that affect water use, regulation, and governance. Arab states need to concentrate on policies that control and regulate water access, promote irrigation and water use efficiency, prevent water pollution, and establish protected areas vital to water resources.

Volume of wastewater treated should increase from below 60% today to a 90-100%. The portion of treated wastewater which is reused should increase from 20% today to 100%. Innovative technologies for water desalination should be developed locally, incorporating the use of solar energy.

For the energy sector, the report proposes sustained investments in energy efficiency and in renewable energy sources through a mix of regulatory standards and economic incentives. A reduction in the average annual per capita consumption of electricity in Arab countries to the world average through energy efficiency measures would generate electricity consumption savings that are estimated in monetary terms to reach \$73 billion annually. A 25% reduction in energy subsidies would free up over \$100 billion over a three-year period, an amount that can be shifted to finance the conversion to green energy sources.

Arab countries should develop low-carbon industrial development strategies

motivated by the opportunity to become energy-efficient economies. This would enhance local industrial competitiveness, income diversification, and job creation. The viable reduction in energy requirements per ton of product is estimated to be in the order of 30%. For example, energy efficiency enhancements in cement manufacturing can reduce energy consumption per ton of cement by 20% to 40%, leading to a cost advantage to the producer through lower energy costs.

One of the most important measures to reduce emissions is deploying the most efficient production technologies in new plants and retrofitting energy efficiency equipment in existing plants where it is economically viable. A 30% reduction in energy requirements due to more efficient industrial processes is estimated to result in annual savings of 150,000 billion kWh or \$12.3 billion.

For the transportation sector, the report argues for policies in favor of mass public transit systems and vehicle fuel efficiency standards. These policy interventions have been demonstrated to have a relatively low cost while yielding high economic, social, and environmental dividends within a short period of time. The benefits would include the provision of dependable, affordable, and safe transportation services that are energy efficient, while minimizing pollution, congestion, and unmanaged urban sprawl. A projected target of 50% greening of the transport sector, resulting from higher energy efficiency and increased use of public transport and hybrid vehicles, should generate savings of \$23 billion annually.

To create healthy and economically competitive urban communities that offer a high quality of living for their inhabitants, the report advocates for the adoption of zoning regulations and mixed-use development. Moreover, traditional design approaches in Arab architecture, which are in many cases more responsive to environmental considerations, should be adapted and applied where relevant and appropriate, thus contributing to environmental, social, and cultural sustainability.

For buildings, a holistic design approach that incorporates environmental principles in building form, materials, orientation, equipment installations, and other aspects is proposed to yield the highest energy efficiency gains. Building efficiency codes and standards are seen as the most effective institutional levers for influencing construction practices. Integrating energy efficient considerations in the design of buildings is expected to result in a reduction of about 29% of projected CO<sub>2</sub> emissions by 2020, which would cut consumption by 217 billion kWh and generate savings of \$17.5 billion annually. In addition, spending \$100 billion in greening 20% of the existing building stock in Arab countries over the next 10 years, by investing an average of \$10,000 per building for retrofitting, is expected to create four million jobs.

The report argues that there is an urgent need for a fundamental shift in the approach to municipal solid waste from waste dumping, burning, and/or land filling to a resource management approach that seeks to capture value from waste materials through reduction, reuse, recycling, and recovery. It is estimated that greening the waste management sector would save Arab countries \$5.7 billion annually. Green waste management contributes to job creation because it is labor-intensive and stimulates the demand for products, systems, and services in other industries. Moreover, it offers unique investment opportunities in recycling,

composting, and energy production. Organic food waste, which accounts for 40-80% of municipal waste in Arab countries, can be used as a raw material to produce compost for agricultural use and biogas to replace fossil fuels. Agricultural waste can also be used as a potential raw material for biofuels production.

In Arab countries today, mainstream economic planning is still anchored in short-term GDP growth and quick fixes, while disregarding the underlying causes of poverty, inequity, unemployment, and environmental degradation. It is clear that to date, the policy response to these shortfalls and associated disparities in income and power has been extremely inadequate.

This report advocates a response anchored in a transition to a green economy. It argues forcefully that the region does not have to choose between economic development, social equality or healthy ecosystems. By design, the green economy seeks to achieve economic, social, and environmental policy goals. The transformative changes called for in this report will require shifts in economic policies and systems.

Making the transition to green development is not a one-time event that can be achieved by a single high level decision. Rather, it must be viewed as a long and arduous process guided both by top-down policy prescription as well as bottom-up public participation. This approach gives transition the political and social legitimacy needed to ensure wide-scale mobilization of efforts to make it a reality.